UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,632	06/13/2002	Kolja Vogel	VOGE3001/JEK	1392

23364　　7590　　05/31/2007 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314	**EXAMINER** HOFFMAN, BRANDON S

ART UNIT	PAPER NUMBER
2136	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/049,632	VOGEL ET AL.
	Examiner	Art Unit	
	Brandon S. Hoffman	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 February 2007</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some *   c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-26 are pending in this office action.

2.   Applicant's arguments, filed February 23, 2007, have been considered and are persuasive. However, a new ground of rejection is being made.

Claim Rejections

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4.   Claims 1-3, 5-7, 10-21, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buffam (U.S. Patent No. 6,185,316) in view of Matyas et al. (U.S. Patent No. 6,697,947).

Regarding claims 1-3 and 20, Buffam teaches a method/apparatus for protecting data, comprising:

- Digitizing apparatus arranged to digitize a biometric feature to thereby create digitized biometric feature data (fig. 1, ref. num 105-125);

- A secret data generator comprising (fig. 10); and

- Encrypting and decrypting apparatus arranged to encrypt and decrypt the fault-tolerantly coded secret data with the aid of the digitized biometric feature data (fig. 10 and fig. 11);

- Wherein an encrypted code word is decrypted on the basis of the digitized biometric feature data, thereby obtaining a decrypted code word (fig. 11, ref. num 910-930),

- Whereby the secret data is recovered from the decrypted code word (col. 22, lines 16-37).

Buffam does not teach fault-tolerantly coding/decoding the secret data or whereby the secret data is recovered from the decrypted code word on the basis of a coding theory method within a freely selectable tolerance level.

Matyas et al. teaches fault-tolerantly coding and decoding the secret data (fig. 13-15) and whereby the secret data is recovered from the decrypted code word on the basis of a coding theory method within a freely selectable tolerance level (fig. 12, ref. num 612).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine fault-tolerantly coding the secret data and using a coding theory method within a freely selectable tolerance level, as taught by Matyas et al., with the apparatus of Buffam. It would have been obvious for such modifications

because biometric samples are sometime not perfect, and therefore need corrected (see col. 14, lines 21-41 of Matyas et al.).

Regarding claims 5 and 21, Buffam as modified by Matyas et al. teaches including the step of creating initial correction data to describe the space of allowed code words (see col. 9, lines 24-26 of Matyas et al.).

Regarding claims 6 and 22, Buffam as modified by Matyas et al. teaches including the step of providing initialization correction data on the basis of the digitized biometric feature data (see fig. 11 of Matyas et al.).

Regarding claim 7, Buffam as modified by Matyas et al. teaches including the steps of:

- Creating authentication correction data on the basis of the digitized biometric authentication feature data (see fig. 11 of Matyas et al.);
- Recovering the digitized biometric feature data on the basis of the authentication and initial correction data (see fig. 8, ref. num 630-645 of Buffam);
- Decrypting encrypted secret data on the basis of the recovered digitized biometric feature data (see fig. 8, ref. num 648 of Buffam).

Regarding claim 10, Buffam as modified by Matyas et al. teaches including using

user-specific initial correction data and/or user-specific fault-tolerant coding (see fig. 4,

ref. num 200 of Matyas et al.).

Regarding claims 11, 12, 17, and 25, Buffam as modified by Matyas et al.

teaches wherein the handwritten signature is broken down into a public and a secret

part and the secret part is a proper subset of the dynamic information of the signature,

and the separation is effected with the aid of empirical inquiries (see fig. 1, ref. num 125

and 128 of Buffam).

Regarding claims 13 and 23, Buffam as modified by Matyas et al. teaches

wherein a hash value is created from the digitized biometric feature data with the aid of

a hash function (see col. 12, lines 15-28 of Buffam).

Regarding claims 14 and 24, Buffam as modified by Matyas et al. teaches

wherein a hash value is created from the digitized biometric authentication feature data

with the aid of a hash function (see col. 12, lines 15-28 of Buffam).

Regarding claim 15, Buffam as modified by Matyas et al. teaches wherein the

biometric feature is a behavioral biometric (see abstract of Buffam).

Regarding <u>claims 16 and 26</u>, <u>Buffam</u> as modified by <u>Matyas et al.</u> teaches wherein the biometric feature consists of a handwritten signature (see col. 18, lines 4-21 of Buffam).

Regarding <u>claim 18</u>, <u>Buffam</u> as modified by <u>Matyas et al.</u> teaches wherein the providing and/or digitizing of the biometric feature is effected several times (see col. 18, lines 57-63 of Buffam).

Regarding <u>claim 19</u>, <u>Buffam</u> as modified by <u>Matyas et al.</u> teaches wherein the secret data are generated with a public-key method (see col. 14, lines 52-65 of Buffam).

<u>Claims 4, 8, and 9</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Buffam</u> (USPN '316) in view of <u>Matyas et al.</u> (USPN '947), and further in view of <u>Camp, Jr. et al.</u> (U.S. Patent No. 6,075,987).

Regarding <u>claim 4</u>, <u>Buffam</u> as modified by <u>Matyas et al.</u> teaches all the limitations of claims 1-3, above. However, <u>Buffam</u> as modified by <u>Matyas et al.</u> does not teach wherein the code word is generated by a generating matrix.

<u>Camp, Jr. et al.</u> teaches wherein the code word is generated by a generating matrix (col. 9, lines 9-23).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine using a matrix for generating a code word, as taught by Camp, Jr. et al., with the method of Buffam/Matyas et al. It would have been obvious for such modifications because a generating matrix doesn't add any parity bits to the end of the plain text word to make them code words.

Regarding claims 8 and 9, Buffam as modified by Matyas et al. teaches all the limitations of claims 1 and 7, above. However, Buffam as modified by Matyas et al. does not teach wherein the initial correction data are created by calculation of the digitized biometric feature data modulo n, and the authentication correction data are created by calculation of the authentication feature data modulo n.

Camp, Jr. et al. teaches wherein the initial correction data are created by calculation of the digitized biometric feature data modulo n, and the authentication correction data are created by calculation of the authentication feature data modulo n (col. 3, lines 31-43).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine creating data by modulo n, as taught by Camp, Jr. et al., with the method of Buffam/Matyas et al. It would have been obvious for such modifications because modulo arithmetic makes it significantly hard to recreate the data without prior knowledge of other information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon S. Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser G. Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BH

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5/26/07